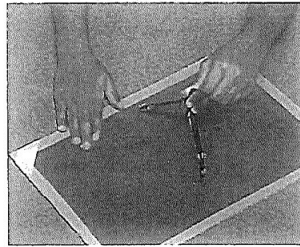
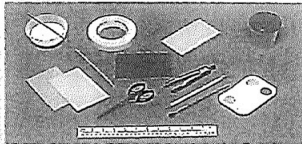


Chinese inventions/innovations

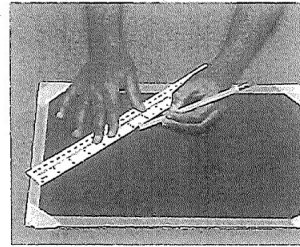
1. Fan

MAKE A FAN

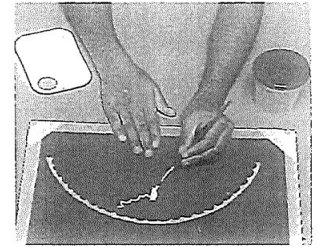
You will need: masking tape, red tissue paper, thick card base, ruler, pencil, compasses, paint (pink, light blue, cream, light green), thin paintbrush, water pot, scissors, 16cm x 1cm balsa strips (x15), barbecue stick, glue and brush, thin card.



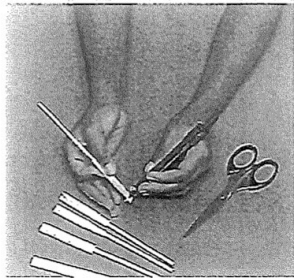
1 Tape tissue paper on to base. Make a compass hole 1cm from the edge. From this mark, draw a 16cm radius semicircle and a 7cm radius semicircle.



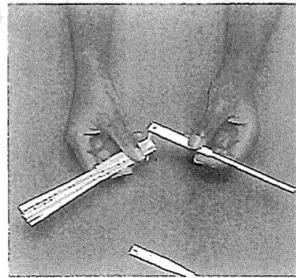
2 Place one end of the ruler at compass hole. Mark the point with a pencil. Draw evenly spaced lines 1cm apart between the semi-circles.



3 Draw your design on to the tissue paper. Paint in the details. Allow to dry. Remove paper from base. Cut out fan along edges of the semicircles.



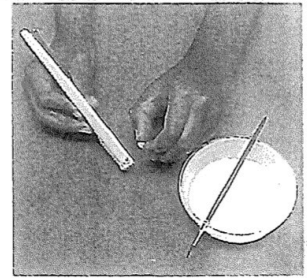
4 Using scissors, cut each balsa strip 1cm narrower (0.5cm each side) for half of its length. Make a compass hole at the base of each strip.



5 Stack strips. Pass a barbecue stick through holes. It must be long enough to fit through and overlap either side. Make sure strips can move freely.



6 Fold the paper backwards and forwards to form a concertina. Glue each alternate fold of the paper to the narrow ends of the strips, as shown.

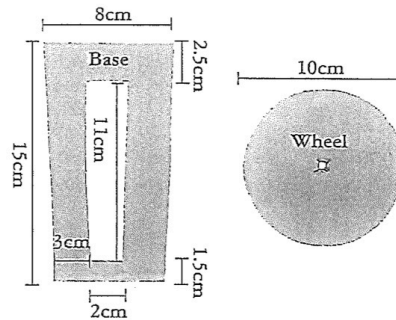
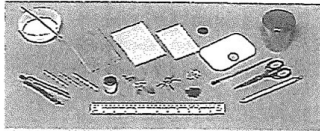


7 Paint the top strip of the fan pink. Allow to dry. Cut out small card discs. Glue them over the ends of the barbecue stick to secure the strips.

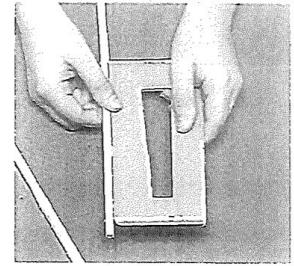
2. Wheelbarrow

MAKE A WHEELBARROW

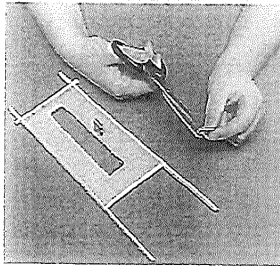
You will need: thick card, ruler, pencil, scissors, compasses, 0.5cm diameter balsa strips, glue and brush, paintbrush, paint (black and brown), water pot, 3.5cm x 0.5cm dowel, 2cm diameter rubber washers (x4).



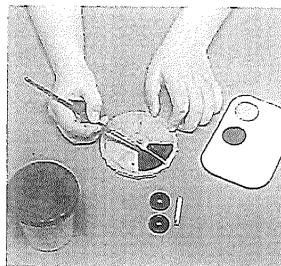
Using the measurements above, draw the pieces on to thick card. Draw the wheel with the compasses. Cut out pieces with scissors.



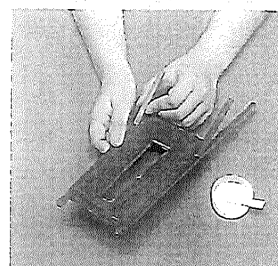
1 Cut 7cm, 8cm and 26cm (x2) balsa strips. Glue 7cm strip to short edge of base and 8cm strip to top edge. Glue 26cm strips to side of base.



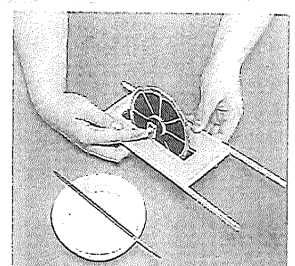
2 Turn the base over. Cut two 2cm x 1cm pieces of thick card. Make a small hole in the middle of each, for the wheel axle. Glue pieces to base.



3 Use compasses and a pencil to draw 1 circle around centre of wheel and 1 close to the rim. Mark on spokes. Paint spaces between spokes black.



4 Paint the barrow and leave it to dry. Cut two 7cm balsa strips with tapered ends to make legs. Paint brown. When dry, glue to bottom of barrow.

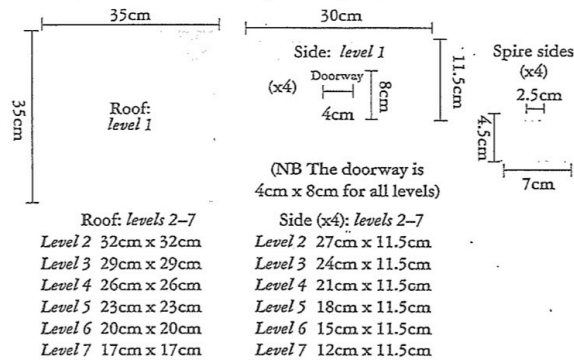


5 Feed dowel axle between axle supports, via 2 washers, wheel, and 2 more washers. Dab glue on ends of axle, to allow wheel to spin without falling off.

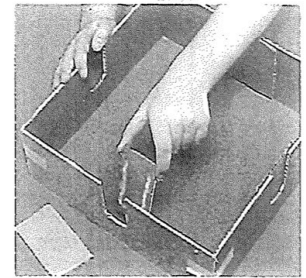
3. Pagoda

MAKE A PAGODA

You will need: thick card, ruler, pencil, scissors, glue and brush, masking tape, corrugated card, 3cm x 1.5cm diameter dowel, embroidery bobbin, half a barbecue stick, paint (pink, terracotta and cream), thick and thin paintbrushes, water pot.



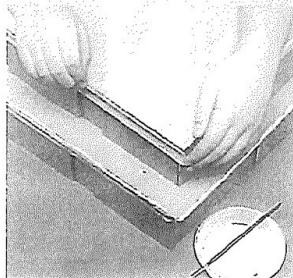
Cut out roof, side and spire pieces from thick card.
Use the measurements shown above (pieces not to scale).



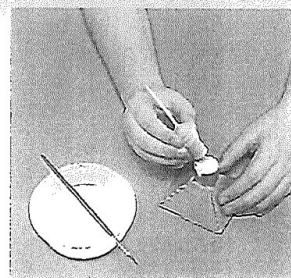
1 Start with level 1. Glue 4 side pieces together. Hold together with masking tape. Then glue pieces of card behind each doorway.



2 Glue level 1 roof on top of level 1 walls. Allow to dry. Centre level 2 sides on roof below. Glue down and hold with tape. Add level 2 roof.



3 Cut four 3cm wide corrugated card strips for each roof. The lengths need to match the roof measurements. Glue to edges of roof and sides.



4 Assemble levels 3 to 7. Glue together spire pieces. Wedge dowel piece into the top. Stick barbecue stick on to bobbin. Then glue bobbin on to dowel.

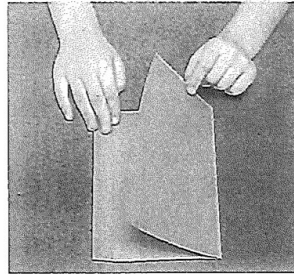
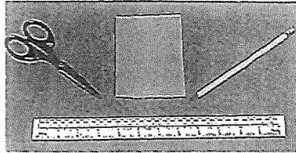


5 Glue spire on to top level. Use a thick brush to paint the base colour. Paint details, such as terracotta for the roof tiles, with a thin brush.

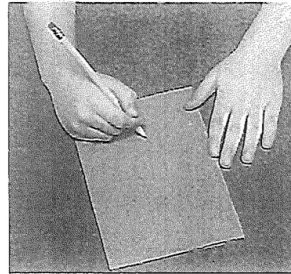
4. Paper Cut-Out

MAKE PAPER CUT-OUTS

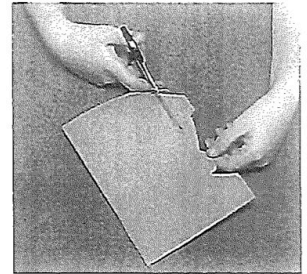
You will need: A4 sized coloured paper, pencil, ruler, scissors.



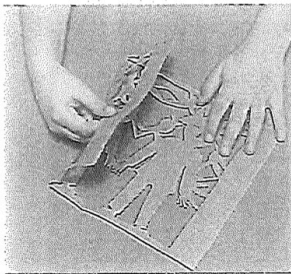
1 Take a piece of coloured paper and lay it flat on a hard surface. Fold it exactly in half widthways. Make a firm crease along the fold, as shown above.



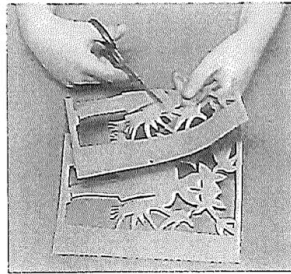
2 Draw a Chinese-style design on the paper. Make sure all the shapes meet up at the fold. Make a tracing of your design so you can use it again.



3 Keeping card folded, cut out shapes. Make sure you don't cut along the folded edge. Cut away areas you want to discard in between the shapes.



4 Now open up your design. Be careful not to tear it. To add details to the figures, fold paper again. Mark the details to be cut along the crease.



5 Using a pair of scissors, carefully cut out the detail along the crease. The cut-out detail will be matched perfectly on the other side of the figure.

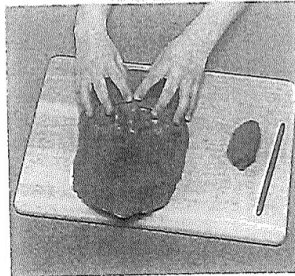
Carefully open up your finished cut-out. Display the design by sticking it to a window, so that light shines through. In China, paper cut-outs are traditionally used to bring luck and good fortune.



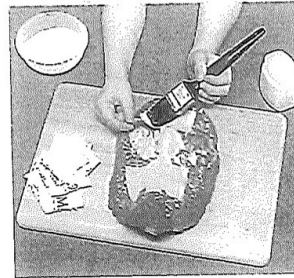
5. Mask

MAKE A MASK

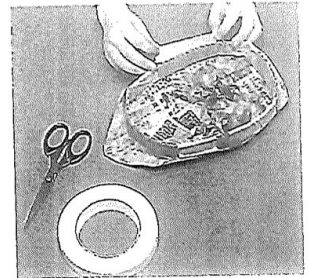
You will need: tape measure, large block of self-drying clay, board, modelling tool, petroleum jelly, newspaper, wood glue and brush, scissors, thick card, masking tape, 2 large white beads, paintbrush, paints (grey, cream, terracotta and yellow), water pot, needle, black wool, string.



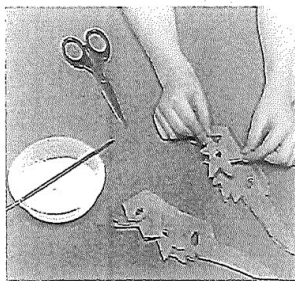
1 Measure the width and length of your face with a tape measure. Make a clay mould. Carve out the eyes and attach a clay nose to the mask.



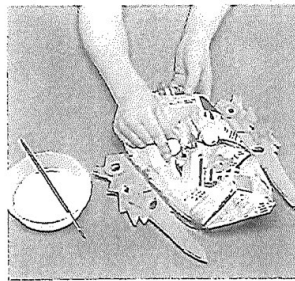
2 Paint front of mask with petroleum jelly. Apply 4-6 layers of papier-mâché. This is made by soaking torn newspaper in water and glue. Leave to dry.



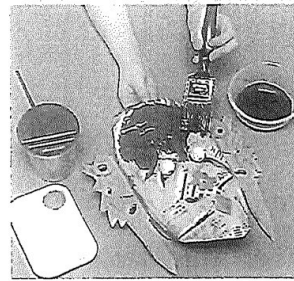
3 Remove mask from the clay mould. Cut a 2.5cm wide strip of card long enough to fit around your face. Bend it into a circle, and tape to the mask.



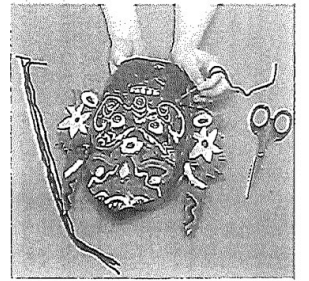
4 Cut 2 pointed ear shapes from card. Fold card at the edge to make flaps. Cut out and glue on small, decorative pieces of card. Glue ears to the mask.



5 Glue on 2 large white beads for the eyes. Cut out more small pieces of card. Glue these on above the eyes. Add another piece of card for the lips.



6 Paint the mask with the grey base colour first. Leave to dry. Then add details using the brighter colours. When dry, varnish with wood glue.

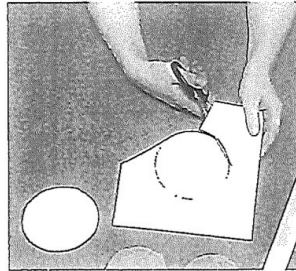
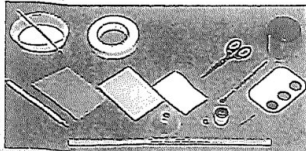


7 Use a needle to thread black wool through for the beard. Tape wool to back of the mask. Thread string through side of mask behind ears to tie it on.

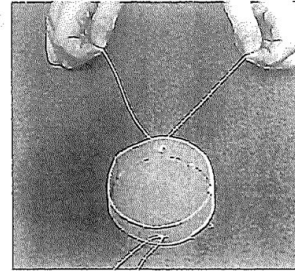
6. Pellet Drum

MAKE A PELLET DRUM

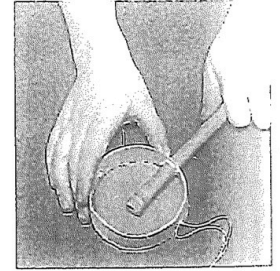
You will need: large roll of masking tape, pencil, thin cream card, thick card, scissors, glue and brush, 2.5cm x 30cm thin grey card, thread, ruler, needle, bamboo stick, paint (red, green and black), water pot, paintbrush, 2 coloured beads.



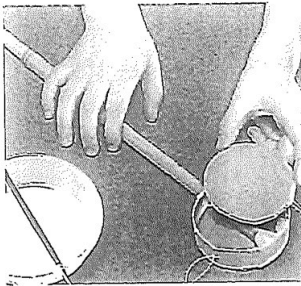
1 Use the outside of the tape roll to draw 2 circles on thin cream card. Use the inside to draw 2 smaller circles on thick card. Cut out, as shown.



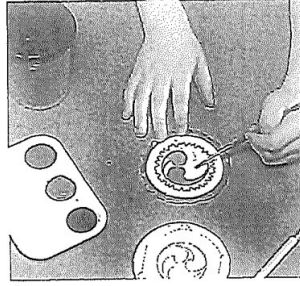
2 Glue grey strip around one of smaller circles. Make 2 small holes each side of strip. Cut two 20cm threads. Pass through holes and knot.



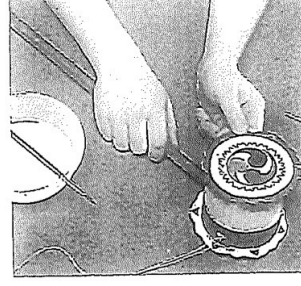
3 Use the scissors to make a hole in the side of the strip for the bamboo stick. Push the stick through, as shown. Tape the stick to the hole.



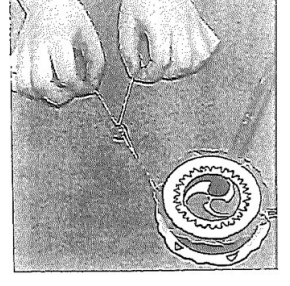
4 Tape the stick handle down securely at the top of the drum. Take the second small circle and glue it firmly into place. This seals the drum.



5 Draw matching designs of your choice on the 2 thin cream card circles. Cut out a decorative edge. Paint in the designs and leave them to dry.



6 Paint the bamboo stick handle red and leave to dry. When the stick is dry, glue the 2 decorated circles into position on top of the 2 smaller circles.

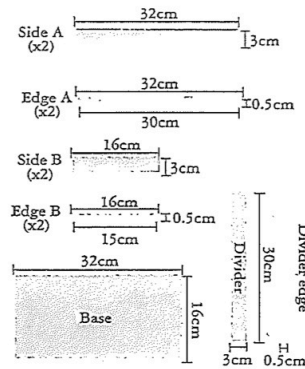
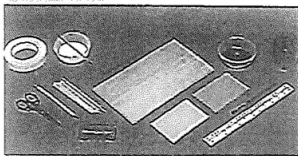


7 Thread on the 2 beads. Make sure the thread is tight enough to allow the beads to hit the centre of the drum. Cut off any excess.

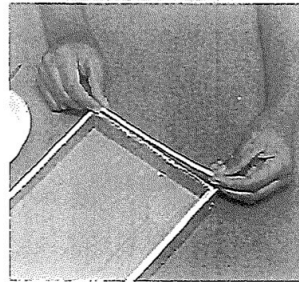
7. Abacus

MAKE AN ABACUS

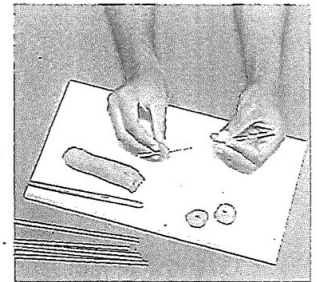
You will need: thick and thin card, ruler, pencil, scissors, wood glue and brush, masking tape, self-drying clay, cutting board, modelling tool, 30cm x 0.5cm dowel (x11), paintbrush, water pot, brown paint.



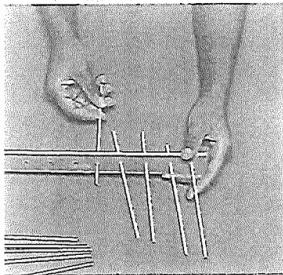
Using the above measurements, cut out pieces from thick brown card and thin grey card. (pieces not shown to scale).



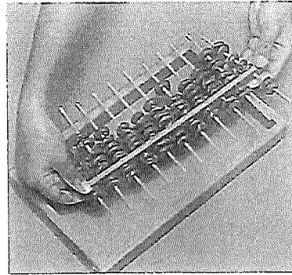
1 Glue sides A and B to the base. Hold the edges with masking tape until dry. Then glue edges A and B to the tops of the sides, as shown.



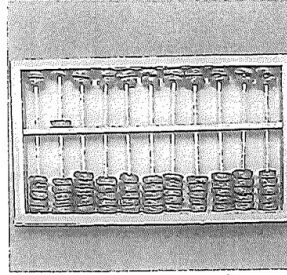
2 Roll the clay into a 2cm diameter sausage. Cut it into 77 small, flat beads. Make a hole through the centre of each bead with a dowel.



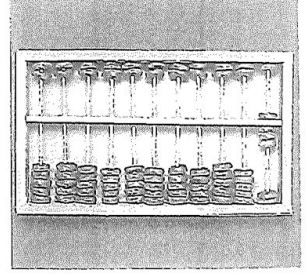
3 Make 11 evenly spaced holes in the divider. Edge one side with thin card. Thread a dowel through each hole. Paint all of the abacus parts. Leave to dry.



4 Thread 7 beads on to each dowel rod – 2 on the upper side of the divider, 5 on the lower. Carefully fit the beads and rods into the main frame.



5 Each upper bead on the abacus equals 5 lower beads in the same column. Each lower bead is worth 10 of the lower beads in the column to its right.

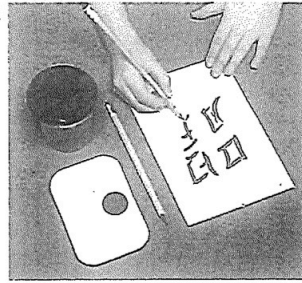
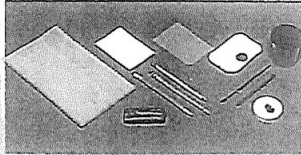


6 Here is a simple sum. To calculate $5+3$, first move down one upper bead (worth 5). Then move 3 lower beads in the same column up (each worth 1).

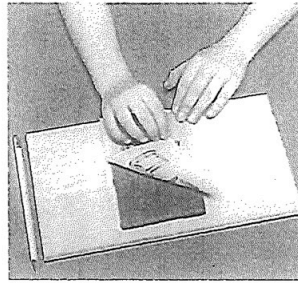
8. Printing Block

MAKE PRINTING BLOCKS

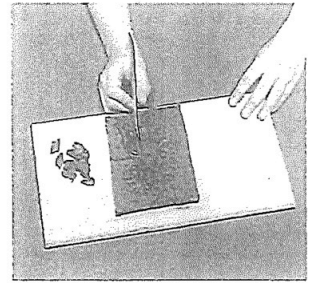
You will need: plain white paper, pencil, paint, soft Chinese brush or thin paintbrush, water pot, tracing paper, board, self-drying clay (15cm x 20cm, 2.5cm thick), modelling tool, wood glue, block printing ink, damp rag.



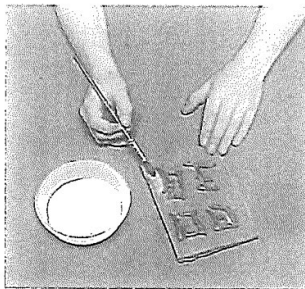
1 Copy or trace the characters from the reversed image block (see opposite). Start off with a pencil outline, then fill in with paint. Leave to dry.



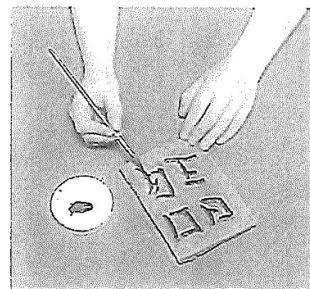
2 Copy design on to tracing paper. Turn the paper over. Place it on the clay. Scribble on the clean side of the paper to leave a mirror image in the clay.



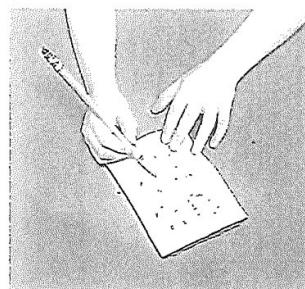
3 Use a modelling tool to carve out characters. Cut away clay all around characters to make a relief (raised pattern). Smooth clay base with your fingertips.



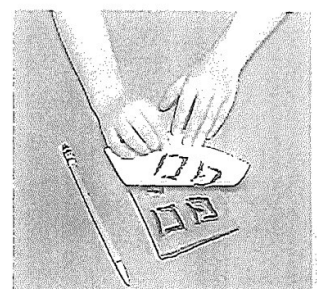
4 When the relief has dried, paint the clay block with wood glue. Leave it to dry thoroughly. When dry, the glue seals and protects the pattern.



5 Now paint the design. Apply a thick layer of printing ink to the raised parts of the clay with a Chinese brush or a soft paintbrush.



6 Lay a thin piece of plain white paper over the inked block. Use a dry brush to press the paper into the ink, so that the paper takes up the design.



7 Lift up the paper to reveal your design. Look after your printing block by cleaning it with a damp rag. You can then use it again and again.